

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

28 DEC 2004

Applicant's or agent's file reference PCTA/KRIB/1	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/KR03/01279	International filing date (day/month/year) 28 JUNE 2003 (28.06.2003)	(Earliest) Priority Date (day/month/year) 29 JUNE 2002 (29.06.2002)
Applicant Korea Reaserch Institute of Bioscience and Biotechnology et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

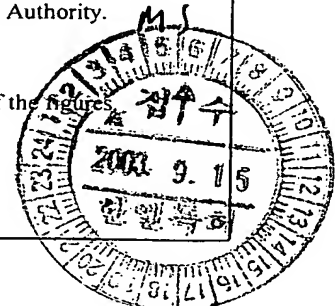
5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawing** to be published with the abstract is Figure No. 5

- ☒ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

☐ None of the figures



Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention relates to polynucleotide containing *HpYPS1* gene coding *Hansenula polymorpha* yapsin1; polypeptide coded thereby; *Hansenula polymorpha* mutant wherein yapsin activity is reduced by the mutation of the *HpYPS1* gene coding *Hansenula polymorpha* yapsin1; recombinant *Hansenula polymorpha* strain expressing a foreign protein prepared by introducing a gene coding a foreign protein to the *Hansenula polymorpha* mutant; and a method for preparing a foreign protein comprising the steps of culturing the recombinant *Hansenula polymorpha* strain under the condition that the foreign protein can be expressed, and isolating the foreign protein from the obtained culture broth.

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 C12N 15/31

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 C12N 15/31

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Blast, PubMed, Delphion "Hansenula", "aspartic protease", "yapsin"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/01535 A1 (Novo Nordisk A/S) 15 January 1998	1-14
A	OLSEN, V. ET AL.: "Identification and Characterization of Saccharomyces cerevisiae Yapsin 3, a New Member of the Yapsin Family of Aspartic Proteases Encoded by the YPS3 Gene", Biochem. J., 1999, Vol.339, pages 407-411 (Biochemical Society) cited in the application	1-14
A	KANG, H. A. ET AL.: "Efficient Production of Intact Human Parathyroid Hormone in a Saccharomyces cerevisiae Mutant Deficient in Yeast Aspartic Protease 3 (YAP3)" Appl. Microbiol. Biotechnol. 1998, Vol.50, pages 187-192 (Springer-Verlag) cited in the application	1-14

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

03 SEPTEMBER 2003 (03.09.2003)

Date of mailing of the international search report

03 SEPTEMBER 2003 (03.09.2003)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT
Information on patent family members

national application No.
PCT/KR03/01279

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 98/01535 A1	15/01/1998	US6110703	29/08/2000
		JP0513941T	24/10/2000
		IL0127583A0	28/10/1999
		ES2187782T3	16/06/2003
		EP0909312B1	04/12/2002
		EP0909312A1	21/04/1999
		DK0909312T3	17/03/2003
		DE69717629C0	16/01/2003
		CN1225126A	04/08/1999
		CA2258307AA	15/01/1998
		AU3255497A1	02/02/1998
		AT0229068E	15/12/2002

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